

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Patricia L. Prior (Reg. No. 33,735) on June 17, 2009.

The application has been amended as follows:

In the claims:

1. (Currently Amended) A two component high strength infiltrant system comprising:

a resin component comprising:

about 70 to about 90 % by weight of resin component of an epoxy resin; and

about 10 to about 30% by weight of resin component of a diluent; and

a hardener component comprising:

an amine selected from unmodified aliphatic amines, modified aliphatic amines, unmodified cycloaliphatic amines, modified cycloaliphatic amines, or combinations thereof;

an amide selected from modified amidoamines, unmodified amidoamines, or combinations thereof; and

optionally a catalyst;

wherein the infiltrant system has a mixed viscosity of less than 150 cps.

2. (Currently Amended) The infiltrant system of claim 1 wherein the epoxy resin is selected from bisphenol A epoxy resin, bisphenol F epoxy resin, or combinations thereof.

18. (Currently Amended) The infiltrant system of claim 17 wherein the epoxy resin is selected from bisphenol A epoxy resin, bisphenol F epoxy resin, or combinations thereof.

34. (Currently Amended) The infiltrant system of claim 17 wherein the resin component comprises:

about 70 to about 90 % by weight of resin component of the epoxy resin selected from bisphenol A epoxy resin, bisphenol F epoxy resin, or combinations thereof; and

about 10 to about 30 % by weight of resin component of a reactive diluent selected from diglycidyl ether, glycidyl ether, or combinations thereof; and the hardener component comprises:

about 20 to about 80 % by weight of hardener component of an unmodified aliphatic amine;

about 20 to about 70 % by weight of hardener component of a modified amidoamine, an unmodified amidoamine, or combinations thereof; and

0 to about 10 % by weight of hardener component of a tertiary amine catalyst.

35. (Currently Amended) The infiltrant system of claim 34 wherein

the resin component comprises:

about 70 to about 85 % by weight of resin component of bisphenol F epoxy resin;

and

about 10 to about 20 % by weight of resin component of the reactive diluent diglycidyl ether; about 5 to about 10 % by weight of resin component of the reactive diluent glycidyl ether; and

the hardener component comprises:

about 30 to about 60 % by weight of hardener component of aminoethyl-piperazine;

about 40 to about 60 % by weight of hardener component of a modified amide/imidazoline or an unmodified amide/imidazoline; and

3 to about 7 % by weight of hardener component of the tertiary amine catalyst.

37. (Currently Amended) The infiltrant system of claim 36 wherein the epoxy resin is selected from bisphenol A epoxy resin, bisphenol F epoxy resin, or combinations thereof.

53. (Currently Amended) The infiltrant system of claim 46 wherein

the resin component comprises:

about 70 to about 90 % by weight of resin component of an epoxy resin selected from bisphenol A epoxy resin, bisphenol F epoxy resin, or combinations thereof;

about 5 to about 20% by weight of resin component of a difunctional reactive diluent, wherein the difunctional reactive diluent is diglycidyl ether; and

about 5 to about 10% by weight of resin component of a monofunctional reactive diluent, wherein the monofunctional reactive diluent is glycidyl ether; and
a hardener component comprising:
about 20 to about 80 % by weight of hardener component of the polyamine;
about 10 to about 40 % by weight of hardener component of the second unmodified aliphatic amine; and
about 10 to about 40 % by weight of hardener component of a mixture of polyamides.

54. (Currently Amended) The infiltrant system of claim 53 wherein the resin component comprises:

about 70 to about 85 % by weight of resin component of bisphenol F epoxy resin;
and
about 10 to about 20 % by weight of resin component of the reactive diluent diglycidyl ether;
about 5 to about 10 % by weight of resin component of the reactive diluent glycidyl ether; and
a hardener component comprising:
about 35 to about 60 % by weight of hardener component of a polyoxypropyleneamine base polyamine;
about 20 to about 30 % by weight of hardener component of a diethylene glycol di(aminopropyl) ether base unmodified aliphatic amine; and

about 20 to about 35 % by weight of hardener component of a mixture of polyamides.

58. (Currently Amended) A two component flexible infiltrant system comprising:
a resin component comprising:
an epoxy resin; and
about 5 to about 30 % by weight of resin component of a difunctional reactive diluent;
about 5 to about 10 % by weight of resin component of a monofunctional reactive diluent; and
a hardener component comprising:
an amine selected from unmodified aliphatic amines, modified aliphatic amines, unmodified cycloaliphatic amines, modified cycloaliphatic amines, or combinations thereof; and
an amide selected from polyamides and mixtures thereof.

59. (Currently Amended) The infiltrant system of claim 58 wherein the epoxy resin is selected from bisphenol A epoxy resin, bisphenol F epoxy resin, or combinations thereof.

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DETAILED ACTION

Pending Claims

Claims 1-12, 14-38, 42-56, 58, 59, and 61 are pending.

Response to Amendment

1. The rejection of claims 24, 25, 36-38, 42-54 under 35 U.S.C. 112, second paragraph, has been overcome by amendment.
2. The objection to claims 53 and 54 has been overcome by amendment.
3. The rejection of claims 9, 11, 15, 58, 59, and 61 under 35 U.S.C. 103(a) as being unpatentable over Whiting et al. (US Pat. No. 3,980,604) in view of Hartman et al. (US Pat. No. 6,068,885) has been overcome by amendment.

Comments Regarding the Examiner's Amendment

- Claim 1 was amended to specify that the amount of diluent is based on the *weight of resin component*.
- Claims 2, 18, 34, 35, 37, 53, 54, and 59 were amended to specify: bisphenol A *epoxy resin* and bisphenol F *epoxy resin*.
- Claim 58 was amended to specify that the amounts of the diluents are based on the *weight of resin component*.
- Claim 58 was amended to remove *unmodified amidoamines* and *modified amidoamines* from the list of amines. The hardener component of claim 58 now aligns with the hardener component of claim 36. Applicant classifies these materials as *amides* in the

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specification: see page 3, lines 26-29 or paragraph 0013 of the corresponding pre-publication.

Allowable Subject Matter

4. Claims 1-12, 14-38, 42-56, 58, 59, and 61 are allowed.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is (571)272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Michael J Feely/
Primary Examiner, Art Unit 1796

June 18, 2009